

AMENDMENT AND RESPONSE

Serial No.: 09/501,876

**REMARKS**

Claims 1-9, 11, 13-19, 21-27, 29, 50-51, and 53-76 are pending in the present application. By this Amendment, previously presented claims 1, 8-9, 11, 16, 19, 26-27, 29, 50, 53, and 55-58 are amended; previously withdrawn claims 30-49 and 52 are cancelled; and new claims 63-76 are presented. (It should be noted that claim 12 was previously cancelled in Applicants' November 19, 2003 Amendment and Response.) Applicants respectfully request reconsideration of the present claims in view of the foregoing amendment and the following remarks.

**I. Formal Matters:**

Continued Examination

Applicants acknowledge Examiner Yu's acceptance of a request for continued examination under 37 C.F.R. §1.114.

Claim Rejections Under 35 U.S.C. §112, Second Paragraph

Previously presented claims 1-9, 11-19, 21-27, 29, 50, 51 and 53-62 were rejected under 35 U.S.C. §112, second paragraph as allegedly failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. This rejection is respectfully traversed.

Applicants have amended previously presented claims 1, 8-9, 16, 19, 26, and 29 as shown above to address the concerns of Examiner Yu. Applicants respectfully submit that presently presented claims 1-9, 11, 13-19, 21-27, 29, 50-51, and 53-74 meet the definiteness requirements of 35 U.S.C. §112, second paragraph. Accordingly, withdrawal of this rejection is respectfully requested.

**II. Prior Art Rejections:**

Rejection of Previously Presented Claims 1-5, 7-8, 19, 21-22, 25-27, 50-51, 55-56, and 59-62 Under 35 U.S.C. §103(a) In View Of Holdt In Combination With Kitko

Previously presented claims 1-5, 7-8, 19, 21-22, 25-27, 50-51, 55-56, and 59-62 were rejected under 35 U.S.C. §103(a) as allegedly being obvious over U.S. Patent No.

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4,683,072 to Holdt et al. (hereinafter "Holdt") in view of U.S. Patent No. 4,248,827 to Kitko (hereinafter "Kitko"). This rejection is respectfully traversed.

Applicants' claimed invention, embodied in independent claim 1, is drawn to a solid unit comprising, *inter alia*, (a) about 1 to 90 wt% of a source of chlorine; (b) a dye having a particle size greater than about 200 microns; and (c) a source of acid; wherein the solid unit (i) comprises about 10 to about 200 parts by weight of the source of chlorine per part of dye, (ii) has a major dimension greater than about 2 millimeters and a weight greater than about 2 grams, (iii) is substantially free of an amount of free water sufficient to act as a reaction medium between the chlorine source and the dye, and (iv) when added to an aqueous diluent provides (1) a pH is in the range of about 3 to about 7, (2) an initial color that indicates the presence of active chlorine, and (3) a color change 15 minutes to 24 hours after contact with the aqueous diluent indicating a change in a concentration of the active chlorine.

Applicants' claimed invention, embodied in independent claim 19, is drawn to an aqueous liquid cleaning or sanitizing composition containing a dye that indicates chlorine concentration, wherein the liquid comprises, *inter alia*, a major proportion of an aqueous diluent, and (a) a source of acid; (b) an effective amount of a dye to obtain a colored solution for a time period of 15 minutes to 24 hours when the pH is in the range of about 3 to about 7; (c) an effective cleaning or sanitizing amount of a chlorine source; wherein the aqueous composition has a pH of less than 7 and the dye color is depleted or changes before the concentration of chlorine drops to less than 50 ppm of the composition.

Applicants' claimed invention, embodied in independent claim 50, is drawn to a sanitizing solution useful in sanitizing a surface, wherein the solution comprises, *inter alia*, (a) about 1 to 90 wt.% of a source of an encapsulated active chlorine source resulting in at least 100 ppm active chlorine; (b) an effective amount of a dye to maintain a colored solution for a period of time ranging from 15 minutes to 24 hours when the pH is in the range of about 3 to about 7; (c) a solid diluent or extender salt; and (d) water, the solution having a pH less than 7, wherein the sanitizing solution undergoes a color change during said period of time.

Applicants' claimed solid composition (i.e., independent claim 1) comprises (i) a source of chlorine, (ii) a reactive dye, which provides a first color or no color to an aqueous solution formed from the solid composition, and (iii) a source of acid. When combined with an

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aqueous diluent, the resulting aqueous solution contains and maintains an amount of active chlorine above a threshold amount of active chlorine for a period of at least 15 minutes. As the amount of active chlorine in the aqueous solution decreases, but stays above the threshold amount, the aqueous solution maintains its initial coloration. However, when the amount of active chlorine in the aqueous solution decreases below the threshold amount, the aqueous solution undergoes a color change indicating to a user that the aqueous solution needs more active chlorine.

Applicants' claimed liquid compositions (i.e., independent claims 19 and 50) comprise (i) a source of chlorine, (ii) a reactive dye, which provides a first color or no color, and (iii) a source of acid. The liquid compositions contain and maintain an amount of active chlorine above a threshold amount of active chlorine for a period of at least 15 minutes. As the amount of active chlorine in the liquid composition decreases, but stays above the threshold amount, the liquid composition maintains its initial coloration. However, when the amount of active chlorine in the liquid composition decreases below the threshold amount, the liquid composition undergoes a color change indicating to a user that the liquid composition needs more active chlorine.

The teaching of Holdt discloses a two-component tablet for cleaning and disinfecting toilet flush tanks. The disclosed tablet comprises (i) component A consisting of a disinfectant selected from a chlorine-releasing compound or an active oxygen-containing compound or acid, and (ii) component B consisting of a dye that degrades when contacted with the chlorine releasing compound (see Holdt, column 2, lines 61-66). It should be noted that component A and component B are physically separated from one another within the final tablet so as to minimize contact between component A and component B. Contact between component A and component B is minimized to prevent premature interaction between component A and component B (see Holdt, column 1, lines 53-57).

The teaching of Holdt fails to teach or suggest at least the following claim features of independent claim 1: (1) a solid unit comprising about 1 to 90 wt% of a source of chlorine in combination with a source of acid; (2) a solid unit comprising a dye having a particle size greater than about 200 microns; (3) a solid unit comprising about 10 to about 200 parts by weight of a source of chlorine per part of dye, (4) a solid unit being substantially free of an

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amount of free water sufficient to act as a reaction medium between a chlorine source and a dye, and (5) a solid unit that when added to an aqueous diluent provides (a) a pH is in the range of about 3 to about 7, (b) an initial color that indicates the presence of active chlorine, and (c) a color change 15 minutes to 24 hours after contact with the aqueous diluent indicating a change in a concentration of the active chlorine.

The teaching of Holdt also fails to teach or suggest the following claim features of independent claims 19 and 50: (1) an aqueous solution containing a source of chlorine in combination with a source of acid (independent claim 19); (2) an aqueous solution containing an effective amount of a dye to obtain a colored solution for a time period of 15 minutes to 24 hours when the pH is in the range of about 3 to about 7 (independent claim 19); (3) an aqueous solution wherein the dye color is depleted or changes before the concentration of chlorine drops to less than 50 ppm of the composition (independent claim 19); (4) an aqueous solution comprising about 1 to 90 wt.% of an encapsulated active chlorine source resulting in at least 100 ppm active chlorine in the aqueous solution (independent claim 50); (5) an aqueous solution comprising an effective amount of a dye to maintain a colored solution for a period of time ranging from 15 minutes to 24 hours when the pH is in the range of about 3 to about 7 (independent claim 50); and (6) an aqueous solution that undergoes a color change during a period of time ranging from 15 minutes to 24 hours (independent claim 50).

Examiner Yu acknowledges that the teaching of Holdt fails to teach or suggest the above claim features of independent claims 1, 19 and 50. See, for example, the June 17, 2004 Office Action, page 4, lines 5-12 (i.e., failure to teach or suggest a source of chlorine in combination with a source of acid); page 4, lines 16-19 (i.e., failure to teach or suggest dyes having a specific particle size); and page 5, lines 7-9 (i.e., failure to teach or suggest a color change after a period of at least 15 minutes).

Examiner Yu relies on the teaching of Kitko to allegedly cure the above-noted deficiencies in the teaching of Holdt.

The teaching of Kitko discloses compositions and methods for sanitizing toilets. The disclosed compositions comprise (i) a hypochlorite sanitizing agent and (ii) an oxidizable dye, each of which are dispensed from separate dispensing means into toilet flush water. The dye is oxidized from a colored state to a colorless state within 5 seconds to 10 minutes,

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preferably within a period of time ranging from 10 seconds to 5 minutes, after contacting the hypochlorite (see Kitko, column 3, lines 53-59). The teaching of Kitko clearly discloses that it is desirable for the colored composition to convert to a colorless composition within a short period of time.

Like the teaching of Holdt, the teaching of Kitko fails to teach or suggest at least the following claim features of independent claim 1: (1) a solid unit comprising about 1 to 90 wt% of a source of chlorine in combination with a source of acid; (2) a solid unit comprising a dye having a particle size greater than about 200 microns; (3) a solid unit being substantially free of an amount of free water sufficient to act as a reaction medium between a chlorine source and a dye, and (4) a solid unit that when added to an aqueous diluent provides (a) a pH is in the range of about 3 to about 7, (b) an initial color that indicates the presence of active chlorine, and (c) a color change 15 minutes to 24 hours after contact with the aqueous diluent indicating a change in a concentration of the active chlorine.

Further, like the teaching of Holdt, the teaching of Kitko fails to teach or suggest the following claim features of independent claims 19 and 50: (1) an aqueous solution containing a source of chlorine in combination with a source of acid (independent claim 19); (2) an aqueous solution an effective amount of a dye to obtain a colored solution for a time period of 15 minutes to 24 hours when the pH is in the range of about 3 to about 7 (independent claim 19); (3) an aqueous solution wherein the dye color is depleted or changes before the concentration of chlorine drops to less than 50 ppm of the composition (independent claim 19); (4) an aqueous solution comprising about 1 to 90 wt.% of an encapsulated active chlorine source resulting in at least 100 ppm active chlorine in the aqueous solution (independent claim 50); (5) an aqueous solution comprising an effective amount of a dye to maintain a colored solution for a period of time ranging from 15 minutes to 24 hours when the pH is in the range of about 3 to about 7 (independent claim 50); and (6) an aqueous solution that undergoes a color change during a period of time ranging from 15 minutes to 24 hours (independent claim 50).

Although both of the teachings of Holdt and Kitko fail to teach or suggest the above-noted claim features of independent claims 1, 19 and 50, Examiner Yu reaches a conclusion of obviousness stating:

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the composition of Holdt by varying the

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amount of dye component or hypochlorite agent as motivated by Keiko [Kitko] because 1) both Holdt and Keiko [Kitko] are directed to chlorine bleach compositions with color indicator for the same use; 2) and the skilled artisan would have had an expectation of successfully producing a composition with desired quickness of the color disappearance. (June 17, 2004 Office Action, page 6, lines 11-16)

Applicants disagree.

Applicants respectfully submit that the toilet cleaning compositions of Holdt and Kitko, taken alone or in combination with one another, fail to teach or suggest Applicants' claimed invention embodied in independent claims 1, 19 and 50. The combined teaching of Holdt and Kitko, even if proper, still fails to teach or suggest Applicants' claimed invention. For example, the combined teaching fails to teach or suggest at least the following claim features: (1) a composition comprising a source of chlorine in combination with a source of acid (independent claims 1 and 19); (2) a composition comprising a dye having a particle size greater than about 200 microns (independent claim 1); (3) a composition being substantially free of an amount of free water sufficient to act as a reaction medium between a chlorine source and a dye (independent claim 1); (4) a composition that when added to an aqueous diluent provides (a) a pH is in the range of about 3 to about 7, (b) an initial color that indicates the presence of active chlorine, and (c) a color change 15 minutes to 24 hours after contact with the aqueous diluent indicating a change in a concentration of the active chlorine (independent claim 1); (5) a composition comprising an effective amount of a dye to obtain a colored solution for a time period of 15 minutes to 24 hours when the pH is in the range of about 3 to about 7 (independent claim 19); (6) a composition wherein the dye color is depleted or changes before the concentration of chlorine drops to less than 50 ppm of the composition (independent claim 19); (7) a composition comprising about 1 to 90 wt.% of an encapsulated active chlorine source resulting in at least 100 ppm active chlorine in the aqueous solution (independent claim 50); (8) a composition comprising an effective amount of a dye to maintain a colored solution for a period of time ranging from 15 minutes to 24 hours when the pH is in the range of about 3 to about 7 (independent claim 50); and (9) a composition that undergoes a color change during a period of time ranging from 15 minutes to 24 hours (independent claim 50).

For at least the reasons given above, Applicants respectfully submit that the combined teaching of Holdt and Kitko fails to make obvious Applicants' claimed invention as

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embodied in independent claims 1, 19, and 50. Since claims 2-5, 7-8, 21-22, 25-27, 51, 55-56, and 59-62 depend from independent claims 1, 19, and 50 and recite additional claim features, Applicants respectfully submit that the combined teaching of Holdt and Kitko also fails to make obvious Applicants' claimed invention as embodied in dependent claims 2-5, 7-8, 21-22, 25-27, 51, 55-56, and 59-62. Accordingly, withdrawal of this rejection is respectfully requested.

Rejection of Previously Presented Claims 6, 9, 11, 13-18, 21-24, 27, 29, 53-54, and 57-58  
Under 35 U.S.C. §103(a) In View Of Holdt In Combination With Gladfelter

Previously presented claims 6, 9, 11, 13-18, 21-24, 27, 29, 53-54, and 57-58 were rejected under 35 U.S.C. §103(a) as allegedly being obvious over the teaching of Holdt in view of U.S. Patent No. 5,358,653 to Gladfelter et al. (hereinafter "Gladfelter"). This rejection is respectfully traversed.

A description of Applicants' claimed invention embodied in independent claims 1 and 19, as well as a description of the teaching of Holdt may be relied upon above. Claims 6, 21-24, 27, and 53 depend from independent claims 1 and 19, and recite additional claim features.

Applicants' claimed invention, embodied in independent claim 9, is drawn to a particulate composition for forming an aqueous solution having an active chlorine source and a dye, wherein the particulate composition comprises, *inter alia*, (a) about 1 to 90 wt% of an encapsulated source of chlorine; (b) an effective chlorine indicating amount of dye; and (c) a source of acid; wherein the composition has substantially no free water, has an extended shelf life of greater than one month, and when added to an aqueous diluent provides a solution color that (i) indicates the presence of an active chlorine concentration, and (ii) undergoes a color change 15 minutes to 24 hours after contact with the aqueous diluent when the pH is in the range of about 3 to about 7.

The teaching of Holdt fails to teach or suggest at least the following claim features of independent claim 9: (1) a particulate composition comprising an encapsulated source of chlorine; (2) a particulate composition comprising a source of chlorine in combination with a source of acid ; (3) a particulate composition comprising substantially no free water; (4) a particulate composition having an extended shelf life of greater than one month; and (5) a particulate composition when added to an aqueous diluent provides a solution color that (i)

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indicates the presence of an active chlorine concentration, and (ii) undergoes a color change 15 minutes to 24 hours after contact with the aqueous diluent when the pH is in the range of about 3 to about 7.

Examiner Yu relies on the teaching of Gladfelter to allegedly cure the above-noted deficiencies in the teaching of Holdt.

Gladfelter discloses solid rinse aid compositions useful in warewashing processes comprising an encapsulated chlorine source, one or more wetting or sheeting agents, optionally a hydrotrope solubilizer material, and a diluent carrier. The solid rinse composition may also comprise other optional components such as dyes selected from dyes “which are stable against degradation in the presence of strong chlorine releasing agents” (Gladfelter at column 11, lines 32-35) to “provide a more pleasing appearance of the rinse aid.” (Gladfelter at column 11, lines 38-39). Thus, the dyes disclosed by Gladfelter are specifically chosen not to lose or change their color in the presence of an effective concentration of chlorine releasing agents.

Like the teaching of Holdt, the teaching of Gladfelter fails to teach or suggest at least the following claim features of independent claim 1: (1) a solid unit comprising a dye having a particle size greater than about 200 microns; (2) a solid unit being substantially free of an amount of free water sufficient to act as a reaction medium between a chlorine source and a dye, and (3) a solid unit that when added to an aqueous diluent provides (a) a pH is in the range of about 3 to about 7, (b) an initial color that indicates the presence of active chlorine, and (c) a color change 15 minutes to 24 hours after contact with the aqueous diluent indicating a change in a concentration of the active chlorine.

Further, like the teaching of Holdt, the teaching of Gladfelter fails to teach or suggest at least the following claim features of independent claim 9: (1) a particulate composition comprising substantially no free water; and (2) a particulate composition when added to an aqueous diluent provides a solution color that (i) indicates the presence of an active chlorine concentration, and (ii) undergoes a color change 15 minutes to 24 hours after contact with the aqueous diluent when the pH is in the range of about 3 to about 7.

In addition, like the teaching of Holdt, the teaching of Gladfelter fails to teach or suggest at least the following claim features of independent claim 19: (1) an aqueous solution wherein the dye color is depleted or changes before the concentration of chlorine drops to less

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than 50 ppm of the composition.

Although both of the teachings of Holdt and Gladfelter fail to teach or suggest the above-noted claim features of independent claims 1, 9 and 19, Examiner Yu reaches a conclusion of obviousness stating that

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the Holdt composition by making an encapsulated disinfectant composition as motivated by Gladfelter because 1) both references are directed to chlorine bleach composition[s] for hard surfaces; 2) Gladfelter teaches that the encapsulating chlorine source has special advantages of stability of the composition during manufacturing, storage, and use and allows to add surfactants for stain removal; and 3) thus one of ordinary skill in the art would had reasonable expectation of successfully producing a stable bleach composition for removal of stains and disinfection. (June 17, 2004 Office Action, page 8, lines 1-8)

Applicants disagree.

Applicants respectfully submit that one of ordinary skill in the art would not have been motivated to combine select components of the warewashing compositions of Gladfelter with select components of the toilet cleaning compositions of Holdt as suggested by Examiner Yu. The teaching of Gladfelter is directed to rinse aid compositions useful in warewashing, a process used to produce dishes and other wares, suitable for use in the preparation of food for human consumption. The teaching of Holdt is directed to tablets and sanitizing agents for cleaning toilet flush tanks. Applicants respectfully submit that one of ordinary skill in the art would not seek out the art of warewashing compositions as disclosed in the teaching of Gladfelter given the teaching of Holdt directed to toilet tank cleaning compositions.

Even if the proposed combination of the teaching of Holdt with the teaching of Gladfelter is proper (and Applicants respectfully submit that such a proposed combination is not proper), the proposed combined teaching still fails to teach or suggest Applicants' claimed invention. There is no suggestion in the combined teaching of at least the following claim features recited in independent claims 1, 9, and 19: (1) a composition comprising a dye having a particle size greater than about 200 microns (independent claim 1); (2) a composition being substantially free of an amount of free water sufficient to act as a reaction medium between a chlorine source and a dye (independent claims 1 and 9); (3) a composition that when added to an aqueous diluent provides (a) a pH is in the range of about 3 to about 7, (b) an initial color that

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indicates the presence of active chlorine, and (c) a color change 15 minutes to 24 hours after contact with the aqueous diluent indicating a change in a concentration of the active chlorine (independent claim 1); (4) a composition when added to an aqueous diluent provides a solution color that (i) indicates the presence of an active chlorine concentration, and (ii) undergoes a color change 15 minutes to 24 hours after contact with the aqueous diluent when the pH is in the range of about 3 to about 7 (independent claim 9); and (5) a composition wherein the dye color is depleted or changes before the concentration of chlorine drops to less than 50 ppm of the composition (independent claim 19).

For at least the reasons given above, Applicants respectfully submit that the combined teaching of Holdt and Gladfelter fails to make obvious Applicants' claimed invention as embodied in independent claims 1, 9, and 19. Since claims 6, 11, 13-18, 21-24, 27, 29, 53-54, and 57-58 depend from independent claims 1, 9, and 19 and recite additional claim features, Applicants respectfully submit that the combined teaching of Holdt and Gladfelter also fails to make obvious Applicants' claimed invention as embodied in dependent claims 6, 11, 13-18, 21-24, 27, 29, 53-54, and 57-58. Accordingly, withdrawal of this rejection is respectfully requested.

**III. New Claims 63-76:**

New claims 63-76 are directed to further embodiments of Applicants' claimed invention. New independent claim 63 is directed to a solid mass comprising, *inter alia*, (a) a dye having a particle size greater than about 200 microns; (b) about 10 to about 200 parts by weight of a source of chlorine per part by weight of the dye; and (c) a source of acid; wherein the solid mass (i) is substantially free of an amount of free water sufficient to act as a reaction medium between the dye and the source of chlorine, and (ii) contains a weight ratio of the dye to the source of chlorine such that when the solid mass is added to water in an amount of about 0.1 to about 20 grams of solid mass per liter of water, a resulting aqueous solution (1) has a pH in the range of about 3 to about 7, (2) has a concentration of active chlorine that is greater than a threshold concentration of active chlorine for a period of time ranging from 15 minutes to 24 hours, (3) has a first color or no color while the concentration of active chlorine is greater than the threshold concentration, and (4) has a second color different from the first color when the concentration of active chlorine falls below the threshold concentration.

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New dependent claims 64-74 depend from new independent claim 63 and recite additional claim features.

New dependent claim 75 depends from independent claim 1 and recites additional claim features. New dependent claim 76 depends from independent claim 19 and recites additional claim features.

Applicants respectfully submit that new claims 63-76 are patentable over the art of record for at least the reasons given above in regard to claims 1-9, 11, 13-19, 21-27, 29, 50-51, and 53-62.

**IV. Conclusion:**

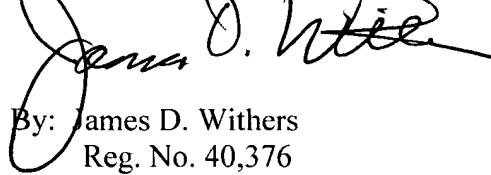
For at least the reasons given above, Applicants submit that claims 1-9, 11, 13-19, 21-27, 29, 50-51, and 53-76 define patentable subject matter. Accordingly, Applicants respectfully request allowance of these claims.

Should the Examiner believe that anything further is necessary to place the application in better condition for allowance, the Examiner is respectfully requested to contact Applicants' representative at the telephone number listed below.

No additional fees are believed due; however, the Commissioner is hereby authorized to charge any deficiency, or credit any overpayment, to Deposit Account No. 503025.

Respectfully submitted,

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W&K Matter No.: 10009.1173USI1